

First Record of the Water Shrew, *Sorex palustris*  
Richardson (Insectivora: Soricidae), in Georgia  
with Comments on its Distribution and Status  
in the Southern Appalachians

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**ABSTRACT**—The first state record of *Sorex palustris* is reported from Georgia, in a markedly boreal habitat in the upper headwaters of the Tallulah River in Towns County. Records in the southern Appalachians indicate the species to be rare and its distribution characterized by a series of disjunct populations.

On 30 May 1994 one adult male water shrew (*Sorex palustris* Richardson) was recovered from a sunken pitfall trap adjacent to Mare Cove Branch at its junction with Burnt Cabin Branch, a tributary of the Tallulah River in extreme northern portion of Towns County, Georgia, at an elevation of 808 m. The specimen was recovered under a rotting log and other woody debris immediately adjacent to the base of a 25 m waterfall in rocky talus. Standard body measurements were: 138-64-19. This is the first record of the species from Georgia and represents an extension of its range approximately 25 km southeast from its nearest reported locality along a short section of Fires Creek in Clay County, North Carolina, at an elevation of 1,160 m (Whitaker et al. 1975)

During the period 30 October 1993 through 30 May 1994 we established a transect of 20 pitfall traps (a total of 5,420 trap nights) along Burnt Cabin Branch. Pitfalls were 946 cm<sup>3</sup> plastic cups (11-cm lip diameter and 14-cm depth) filled with approximately 0.13-L formalin solution and set flush to the ground adjacent to fallen logs, rocks stumps, or other forest floor debris within 5 m of the stream edge. Traps were checked biweekly. The collection locality, which was selectively logged in the past, is a mature, predominantly northern hardwood forest community dominated by yellow birch

(*Betula lutea*), black birch (*B. lenta*), liden (*Tilia heterophylla*), and hemlock (*Tsuga canadensis*), with a rhododendron (*Rhododendron maximum*) understory.

The mammalian fauna of Burnt Cabin Branch has marked boreal affinities. Wharton (1968) reported the first Georgia records of the masked shrew (*Sorex cinereus*) and pygmy shrew (*S. hoyi*) from Beech Creek, another tributary of the Tallulah River within 500 m of the present locality, and Laerm (1992) reported the first Georgia record of the hairy-tailed mole (*Parascalops brewerii*) from the present locality. Other small mammals recovered in pitfalls and snap traps at Burnt Cabin Branch include *Sorex cinereus*, *S. fumeus*, *Blarina brevicauda*, *Tamiasciurus hudsonicus*, *Peromyscus maniculatus*, *Napaeozapus insignis*, and *Clethrionomys gapperi*.

*Sorex palustris* is distributed in the transcontinental Canadian boreal forest from Nova Scotia westward to southeastern Alaska and southward throughout much of the Sierra Nevada and Rocky Mountains in the western United States as well as the Appalachian Mountains to Tennessee, North Carolina (Hall 1981, Beneski and Stinson 1987), and now Georgia in the eastern United States. Populations throughout the Appalachian Mountains from southwestern Pennsylvania to Georgia are referable to *S. palustris punctulatus* Hooper 1942, the West Virginia water shrew. Based on available published sources, museum records, and personal communications it appears that *S. p. punctulatus* is rare and its distribution characterized by a series of apparently disjunct populations.

The northernmost record for *S. p. punctulatus* is a single specimen from Cove Run in the Negro Mountains, Somerset County, Pennsylvania (Doutt et al. 1966, Enders 1985). More recently, two additional specimens have been obtained from Somerset County (C. Bier and S. McLaren, personal communication; specimens in Carnegie Museum of Natural History). Apparently, the distribution of this subspecies is disjunct from that of *S. p. albibarbis* which is reported from central and northeastern Pennsylvania and northward (Hall 1981, Beneski and Stinson 1987, Merritt 1987).

Mansueti (1958), Paradiso (1969), and Feldhamer et al. (1984) discussed the questionable occurrence of *S. palustris* in Maryland. However, seven individuals of *S. p. punctulatus* are now known from seven sites in Maryland, all from Garrett County (E. Thompson, Maryland Natural Heritage Program, personal communication). At least 12 individuals are known from five counties (Pendleton, Pocahontas, Preston, Randolph, and Tucker) in West Virginia (Kellogg 1937, Hooper 1942, McKeever 1952, and records on file with West Virginia

Heritage Inventory Program). Three individuals are known from a single locality in Bath County, Virginia, and five from three localities in Highlands County, Virginia (Pagels and Tate 1976, Pagels 1987, Handley 1991, and J. Pagels, personal communication). Thirteen records are known from the Great Smoky Mountains National Park, Sevier County, Tennessee (Conaway and Pfitzer 1952, Linzey and Linzey 1968), and Harvey et al. (1991) report an additional 18 specimens from four localities in Monroe County, Tennessee. In North Carolina it is known from five individuals from Clay County and one specimen from Great Smoky Mountains National Park in Swain County (Whitaker et al. 1975, Linzey 1983, Webster 1987).

Compared to other soricids in the southeastern United States, *Sorex palustris* appears to be rare. *Sorex p. punctulatus* is considered a Category 2 taxon by the United States Fish and Wildlife Service, is listed as endangered in Virginia (Virginia Department of Game and Inland Fisheries), and is considered a species of special concern in North Carolina (North Carolina Natural Heritage Program) and Tennessee (Tennessee Wildlife Resource Agency). Although other soricids, such as *Sorex hoyi* and *Sorex dispar*, that historically have been considered extremely rare are now known to be more widely distributed and more common than previously believed (Pagels 1987, Handley 1991, Laerm et al 1994), the water shrew appears to be the rarest and most localized shrew in the southeastern United States. Additional surveys for the water shrew are required to assess its true status.

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